

# DO HOUSEHOLDS SAVE MORE WHEN THE KIDS LEAVE HOME?

BY IRENA DUSHI, ALICIA H. MUNNELL, GEOFFREY T. SANZENBACHER, ANTHONY WEBB,  
AND ANQI CHEN\*

---

## Introduction

Kids are expensive. As a result, when children become financially independent, parents often have a substantial amount of extra money on hand. In this case, they have two basic choices: spend more on themselves or increase their saving for retirement. What they actually do is an open question.

Answering this question is important – much of the debate on whether or not we face a retirement savings crisis comes down to what parents do when the kids leave. If they spend the extra money, they will arrive at retirement with fewer resources and a higher standard of living to maintain. In contrast, if they save the money, they will have more resources for retirement and a lower standard of living to maintain. This *brief*, based on a recent paper, uses tax data to analyze how saving behavior in 401(k) plans changes for married couples when their children leave.<sup>1</sup>

The discussion is organized as follows. The first section provides more detail on why households' response to the kids leaving is important. The second section describes the data and methodology. The third section summarizes the results. The final section concludes that households do increase their

savings when the kids leave, but the increases are extremely small, suggesting that we do indeed face a retirement savings crisis.

## Why Empty Nesters' Saving Affects Retirement Readiness

Researchers differ as to whether the United States faces a retirement savings crisis. Some argue that half of households are at risk of not being able to maintain their customary spending level in retirement.<sup>2</sup> Others contend that maintaining spending into retirement is an overly ambitious and indeed sub-optimal goal. These researchers find that less than one-fifth of households are saving below their "optimal" level.<sup>3</sup> One of the biggest reasons for these vastly different predictions is how the two groups of researchers treat households with children.

Studies that find many households are ill prepared for retirement assume that a household's goal is to maintain a constant level of consumption through-

---

\* Irena Dushi is an economist with the U.S. Social Security Administration. Alicia H. Munnell is director of the Center for Retirement Research at Boston College (CRR) and the Peter F. Drucker Professor of Management Sciences at Boston College's Carroll School of Management. Geoffrey T. Sanzenbacher is a research economist at the CRR. Anthony Webb is research director of the Retirement Equity Lab at The New School's Schwartz Center for Economic Policy Analysis. Anqi Chen is a research associate at the CRR.

out their lives – regardless of whether the children are at home. This assumption means that, after the kids leave, the parents would maintain the same total consumption as before, shifting their spending away from child care, school supplies, and take-out food and towards restaurant meals, vacations, or new entertainment systems. The net effect is that households need to have enough income at retirement to maintain a consumption level similar to the level they had when the kids were at home. As consumption remains constant in this scenario, the departure of the kids does not trigger increased saving.

In contrast, studies that find that most households are saving enough assume that it is optimal for the household to vary consumption throughout the lifespan. In these models, households have four basic modes of consumption: 1) relatively low consumption before the kids are born; 2) high consumption when the kids are at home; 3) low consumption before retirement when the kids are gone; and 4) low and declining consumption in retirement, reflecting the lower probability the household is alive at older ages. This pattern means that, after the kids leave, parents save the money they used to spend on their children rather than spending more on themselves. These parents would, thus, arrive at retirement with both more savings and a lower level of consumption to maintain.

Figure 1 shows the percentage of gross income spent on consumption over time to illustrate the basic difference between these two views of the world. Parents following Path 1 (“many at risk”) need to have enough money at retirement to finance the rectangle

between the red line and Social Security benefits during retirement. Parents following Path 2 (“few at risk”) need to have enough money to finance the triangle between the black line and Social Security – a far smaller amount. Which path people actually follow is an empirical question, but to date the scant evidence is mixed.<sup>4</sup>

## Data and Methodology

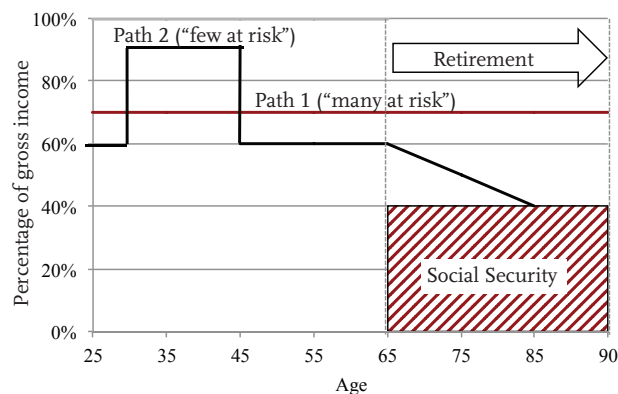
Our primary analysis uses the *Health and Retirement Study* (HRS), a panel survey of households over age 50 that has been administered every two years since 1992. The survey collects in-depth information on income, education, pension eligibility, and children’s residence and schooling. We then link these data to 1099 W-2 tax data to get an accurate measure of households’ 401(k) saving. The analysis focuses only on households that are married throughout the sample to avoid changes in saving that may be due to family transitions.<sup>5</sup> The sample is further restricted to households where at least one member reported being eligible for a 401(k) plan at their employer.

The goal of the analysis is to see what happens to 401(k) saving when the kids leave home. Does it stay relatively constant, as suggested by Path 1, or does it increase, as suggested by Path 2?

To answer this question, the first step is to define what it means to have kids in the home. We consider three definitions. The first is having kids who physically live at home, regardless of age. However, this first definition omits kids residing at college. Since the purpose is to identify financially dependent kids, our second definition includes kids who moved out of the household but are still in school. This definition essentially assumes all children in college are financially dependent, even though some kids attending college may be financially independent. We therefore consider a third definition in which kids in college are excluded if, in a prior interview, they were neither physically resident nor attending college, i.e., in the past they were likely to have been financially independent.

One problem with the HRS is that it focuses only on older workers – what if younger workers behave differently? Thus, we augment the HRS analysis with a similar one using the *Survey of Income and Program Participation* (SIPP). The SIPP analysis uses the 1992-2008 panels, reflecting a similar time period as the HRS exercise. Again, we link the data on

FIGURE 1. PERCENTAGE OF GROSS INCOME SPENT ON CONSUMPTION, BY AGE, FOR HOUSEHOLDS WITH CHILDREN



Source: Authors' illustration.

education, race, and age available in the SIPP to administrative tax data on 401(k) contributions. Unfortunately, in the SIPP, this linkage requires sacrificing some detail on the resident and school enrollment status of children.<sup>6</sup> Instead, variables are created for couples who have a youngest child 18 and under (approximating children present), who have a youngest child between 19 and 22 (approximating children potentially in college), and those with a youngest child age 23 and over (approximating out of college). Although the approach used with the SIPP does not provide a perfect definition of the kids leaving home, the results serve as a useful check on the HRS.

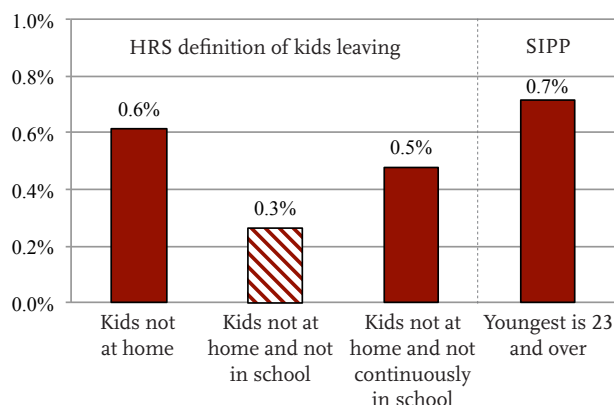
Using these data and definitions, the next step is to compare households that still have resident children to households where the kids are gone.<sup>7</sup> This analysis uses a regression approach, where the dependent variable is the share of the household’s earnings contributed to a 401(k). The independent variable of interest is whether the household’s children have left.<sup>8</sup> Other independent variables include the household’s education, race, earnings, and financial wealth. The age of the male in the household is also included and is an especially important control, since older households tend to save more and are also more likely to have kids who have left. Finally, because homeowners who still have mortgages may be less apt to save through a 401(k) due to home payments, we also control for the presence of a mortgage as a dependent variable, as below:

$$\frac{401(k) \text{ contributions}}{\text{earnings}} = f(\text{kids left, education, race, age, earnings, wealth, mortgage})$$

## Results

The results of the regressions are shown in Figure 2 for each of the three definitions of resident kids for the HRS and then for households with a youngest child 23 or older for the SIPP.<sup>9</sup> The bars show how much more a household saved when the kids were gone (or older) as compared to a similar household where the children were still there. The figure illustrates two facts. First, households do increase their 401(k) saving when the kids leave by 0.3 to 0.7 percentage points, depending on the definition and dataset being considered.

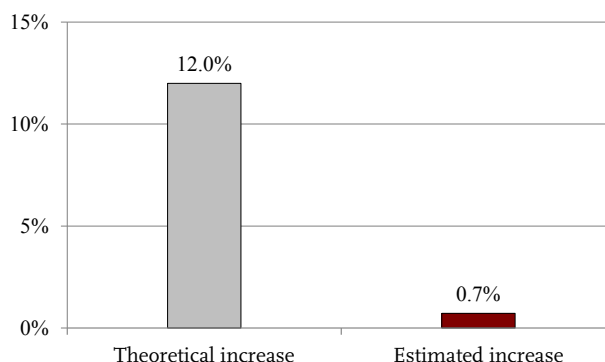
FIGURE 2. PERCENTAGE-POINT INCREASE IN 401(K) SAVING FOR HOUSEHOLDS WHEN KIDS LEAVE



Sources: Authors’ calculations from University of Michigan, *Health and Retirement Study* (HRS), 1992-2010; and U.S. Census Bureau, *Survey of Income and Program Participation* (SIPP), 1992-2008.

Second, the increase, while statistically significant, is very small compared to that suggested by theory. For example, consider a household with two adults and two kids at home making \$100,000 and contributing 6 percent of salary to a 401(k). The research studies that assume households follow an “increase-saving” path would suggest that the couple move all the way to the 401(k) deferral limit of \$18,000 in 2015 or 18 percent of earnings, a 12-percentage-point increase. Yet the results showed, at most, only a 0.7-percentage-point increase (see Figure 3). In other

FIGURE 3. PERCENTAGE-POINT INCREASE IN 401(K) SAVING FOR HOUSEHOLDS WHEN KIDS LEAVE, THEORETICAL AND ESTIMATED



Note: The estimated increase is for the SIPP definition (youngest child is 23+), which is the highest estimate. Sources: Authors’ calculations from the 1992-2010 HRS and the 1992-2008 SIPP.

words, while saving does increase, the amount is tiny compared to that suggested by studies that find few households at risk of a poor retirement.<sup>10</sup>

## Conclusion

Households' financial response to the kids leaving may seem like a matter of personal preference, but it has important implications for retirement preparedness. If households stand pat and maintain their total consumption when the kids leave, they will aim to keep that consumption level in retirement and will have less savings with which to do it. If, instead, they increase saving, they will have more retirement assets and a lower level of consumption to maintain. The results in this *brief* suggest that when the kids leave, households do increase their saving through their 401(k)s, but just slightly. The size of the increase is more consistent with research that suggests roughly half of households do not have enough savings for retirement than with the optimal savings research. Although this finding is not the last word on the subject – perhaps parents assist children financially even after they have left home – it does suggest that we should be concerned about households' preparedness for retirement.

## Endnotes

- 1 Dushi et al. (2015).
- 2 For example, see Mitchell and Moore (1997) or Munnell, Orlova, and Webb (2013).
- 3 “Optimal” means that they are accumulating enough wealth to smooth the marginal utility of consumption over their life-cycle. For example, see Scholz and Seshadri (2008) and Scholz, Seshadri, and Khitatrakun (2006).
- 4 Coe and Webb (2010) examine this question using the *Health and Retirement Study's* Consumption and Activities Mail Survey (CAMS) data. They find no evidence that households decrease total consumption when the kids leave home. On the other hand, Rottke and Klos (2013), using German data, find a moderate decrease in consumption but still only a small increase in saving when the kids leave home.
- 5 Households that started married but ultimately split up are kept in the sample until the point they split up. For more detail on the sample, see Dushi et al. (2015).
- 6 For details on how this linkage occurs and why it results in the loss of some detail, see the full paper (Dushi et al. 2015).
- 7 The full paper also contains an analysis that compares households to themselves before and after the kids leave. Since such an analysis is not possible in the SIPP, where households are observed just once, it is not shown here. In any case, the results of the two analyses are similar. See Dushi et al. (2015).
- 8 In addition, a control variable is used for households that never had any children, because these households are likely very different than those with children who have left.
- 9 For full results, see the Appendix.
- 10 In the full paper, we also examined whether non-401(k) financial wealth increased as well as whether households paid off their mortgage early. Neither of these measures showed a large enough increase to be consistent with models suggesting that few people are at risk of having insufficient retirement savings.

## References

- Coe, Norma B. and Anthony Webb. 2010. "Children and Household Utility: Evidence from Kids Flying the Coop." Working Paper 2010-16. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Dushi, Irena, Alicia H. Munnell, Geoffrey T. Sanzenbacher, and Anthony Webb. 2015. "Do Households Increase Their Savings When the Kids Leave Home?" Working Paper 2015-26. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Mitchell, Olivia S. and James F. Moore. 1997. "Projected Retirement Wealth and Savings Adequacy in the Health and Retirement Study." Working Paper 6240. Cambridge, MA: National Bureau of Economic Research.
- Munnell, Alicia H., Natalia Orlova, and Anthony Webb. 2013. "How Important Is Asset Allocation to Financial Security in Retirement?" In *The Market for Retirement Financial Advice*, eds. Olivia S. Mitchell and Kent Smetters, 89-106. Oxford, United Kingdom: Oxford University Press.
- Munnell, Alicia H., Matthew S. Rutledge, and Anthony Webb. 2014. "Are Retirees Falling Short? Reconciling the Conflicting Evidence." Working Paper 2014-16. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Rottke, Simon and Alexander Klos. 2013. "Saving and Consumption When Children Move Out." German Economic Association Annual Conference.
- Scholz, John K., Ananth Seshadri, and Surachai Khittrakun. 2006. "Are Americans Saving 'Optimally' for Retirement?" *Journal of Political Economy* 114(4): 607-643.
- Scholz, John K. and Ananth Seshadri. 2008. "Are All Americans Saving 'Optimally' for Retirement?" Presented at the 10th Annual Joint Conference of the Retirement Research Consortium in Washington DC, August 7-8.
- University of Michigan. *Health and Retirement Study, 1992-2010*. Ann Arbor, MI
- U.S. Census Bureau. *Survey of Income and Program Participation, 1992-2008*. Washington, DC.

---

# APPENDIX

---

TABLE A1. HRS REGRESSION OF SHARE OF HOUSEHOLD EARNINGS CONTRIBUTED TO 401(K) PLANS

	Definition 1	Definition 2	Definition 3
Children not in home	0.614 *** (0.234)	0.264 (0.232)	0.479 ** (0.233)
Never had children	1.566 ** (0.737)	1.952 *** (0.737)	2.065 *** (0.738)
<i>Demographics</i>			
Black non-Hispanic	-2.335 *** (0.314)	-2.368 *** (0.315)	-2.349 *** (0.315)
Hispanic	-1.439 *** (0.368)	-1.497 (0.367)	-1.468 *** (0.367)
Age	1.264 *** (0.191)	1.272 *** (0.191)	1.272 *** (0.191)
Age <sup>2</sup>	-0.012 *** (0.002)	-0.011 *** (0.002)	-0.012 *** (0.002)
<i>Education</i>			
Less than high school	-2.690 *** (0.356)	-2.688 *** (0.356)	-2.699 *** (0.356)
High school graduate	-2.369 *** (0.303)	(2.347) *** (0.304)	(2.369) *** (0.304)
Some college	-1.997 *** (0.313)	-1.974 *** (0.303)	-1.992 *** (0.313)
<i>Earnings and Wealth</i>			
Log of earnings	0.790 *** (0.157)	0.786 *** (0.157)	0.790 *** (0.157)
Log net financial wealth	0.244 *** (0.024)	0.247 *** (0.024)	0.245 *** (0.024)
Has mortgage	-0.241 (0.240)	-2.640 (0.239)	-0.256 (0.239)
Constant	-38.099 *** (5.961)	-38.264 *** (5.964)	-38.284 *** (5.958)
Number of observations	10,843	10,843	10,843

Notes: Significance is indicated at the 1-percent level (\*\*\*), 5-percent level (\*\*) and 10-percent level (\*). All variables refer to the male member of the couple. Definition 1 is having kids who are physically living at home; Definition 2 is having kids who are physically living at home or in school; and Definition 3 is having kids who are physically living at home or in school and who never ceased living at home or school. All regressions also control for the HRS wave.

Source: Authors' calculations from the 1992-2010 HRS.

---

 TABLE A2. SIPP REGRESSION OF SHARE OF HOUSEHOLD EARNINGS CONTRIBUTED TO 401(K) PLANS
 

---

Youngest kid 19-22	0.030	
	(0.079)	
Youngest kid 23+	0.718 ***	
	(0.089)	
Never had kids	0.553 ***	
	(0.061)	
<i>Demographics</i>		
Black non-Hispanic	-0.750 ***	
	(0.088)	
Hispanic	-0.418 ***	
	(0.092)	
Age	0.054 ***	
	(0.003)	
<i>Education</i>		
High school graduate	0.420 ***	
	(0.123)	
Some college	0.839 ***	
	(0.109)	
College graduate	1.51 ***	
	(0.131)	
<i>Earnings and Wealth</i>		
Log of earnings	0.874 ***	
	(0.043)	
DB pension available	0.223 ***	
	(0.043)	
Individual owns residence	0.717 ***	
	(0.057)	
Constant	-10.672 ***	
	(0.044)	
Panel controls?	Yes	
Number of observations	40,388	

---

Notes: Significance is indicated at the 1-percent level (\*\*\*), 5-percent level (\*\*) and 10-percent level (\*). All variables refer to the male member of the married couple.  
 Source: 1992-2008 SIPP.



### About the Center

The mission of the Center for Retirement Research at Boston College is to produce first-class research and educational tools and forge a strong link between the academic community and decision-makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception in 1998, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

### Affiliated Institutions

The Brookings Institution  
Massachusetts Institute of Technology  
Syracuse University  
Urban Institute

### Contact Information

Center for Retirement Research  
Boston College  
Hovey House  
140 Commonwealth Avenue  
Chestnut Hill, MA 02467-3808  
Phone: (617) 552-1762  
Fax: (617) 552-0191  
E-mail: [crr@bc.edu](mailto:crr@bc.edu)  
Website: <http://crr.bc.edu>

---

© 2016, by Trustees of Boston College, Center for Retirement Research. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that the authors are identified and full credit, including copyright notice, is given to Trustees of Boston College, Center for Retirement Research.

The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Retirement Research Consortium. The opinions and conclusions expressed are solely those of the authors and do not represent the opinions or policy of SSA or any agency of the federal government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the contents of this report. Reference herein to any specific commercial product, process or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply endorsement, recommendation or favoring by the United States Government or any agency thereof.